

## NUCLEOTIDE AND DEDUCED AMINO ACID SEQUENCES

MOP1:

Sequence I.D. No. 1

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1  cacgaggcag cactctcttc gtcgcttcgg ccagtgtgtc gggtctgggccc ctgacaagcc
61  acctgaggag aggctcggag ccggggcccg accccggcga ttgccgcccg cttctctcta
121 gtctcacgag gggtttcccg cctcgcaccc ccacctctgg acttgccctt cttctctctc
181 tccgcgtgtg gagggagcca gcgcttaggc cggagcgagc ctggggggccg cccgccgtga
241 agacatcgcg gggaccgatt caccatggag ggcgccggcg gcgcgaacga caagaaaaag
301 ataagtctctg aacgtcgaaa agaaaagtct cgagatgcag ccagatctcg gcgaagttaa
361 gaatctgaag ttttttatga gcttgctcat cagttgccac ttccacataa tgtgagttcg
421 catcttgata aggcctctgt gatgaggctt accatcagct atttgcggtg gaggaaactt
481 ctggatgctg gtgatttgga tattgaagat gacatgaaag cacagatgaa ttgcttttat
541 ttgaaagcct tggatgggtt tgttatgggt ctcacagatg atggtgacat gatttacatt
601 tctgataatg tgaacaaata catgggatta actcagtttg aactaactgg acacagtgtg
661 tttgatttta ctcattccatg tgaccatgag gaaatgagag aaatgcttac acacagaaat
721 ggcccttgta aaaagggtaa agaacaaaac acacagcgaa gcttttttct cagaatgaag
781 tgtaccctaa ctagccgagg aagaactatg aacataaagt ctgcaacatg gaaggatttg
841 cactgcacag gccacattca cgtatatgat accaacagta accaacctca gtgtgggtat
901 aagaaaccac ctatgacctg cttggtgctg atttgtgaac ccattctcta cccatcaaat
961 attgaaattc ctttagatag caagactttc ctcagtcgac acagcctgga tatgaaattt
1021 tcttattgtg atgaaagaat taccgaattg atgggatatg agccagaaga acttttaggc
1081 cgctcaattt atgaatatta tcatgctttg gactctgata atctgaccaa aactcatcat
1141 gatatgttta ctaaaggaca agtcaccaca ggacagtaca ggatgcttgc caaaagaggt
1201 ggatatgtct gggttgaaac tcaagcaact gtcatatata acaccaagaa ttctcaacca
1261 cagtgcattg tatgtgtgaa ttacgttgtg agtgggatta ttcagcacga cttgattttc
1321 tcccttcaac aaacagaatg tgccttataa ccggttgaat cttcagatat gaaaatgact
1381 cagctattca ccaaagttga atcagaagat acaagtagcc tctttgacaa acttaagaag
1441 gaacctgatg ctttaacttt gctggcccca gccgctggag acacaatcat atctttagat
1501 tttggcagca acgacacaga aactgatgac cagcaacttg aggaagtacc attatataat
1561 gatgtaattg tcccttcacc caacgaaaaa ttacagaata taaatttggc aatgtctcca
1621 ttaccacccg ctgaaacgcc aaagccactt cgaagtatg ctgaccttga atcaatcaa
1681 gaagttgcat taaaattaga accaaatcca gagtcactgg aactttcttt taccatgcc
1741 cagattcagg atcagacacc tagtccttcc gatggaagca ctagacaaag ttcacctgag
1801 cctaatagtc ccagtgaata ttgtttttat gtggatagtg atatggtcaa tgaattcaag
1861 ttggaattgg tagaaaaact ttttgctgaa gacacagaag caaagaaccc attttctact
1921 caggacacag atttagactt ggagatgtta gtcctctata tcccaatgga tgatgacttc
1981 cagttacgtt ccttcgatca gttgtcacca ttagaaagca gttccgcaag ccctgaaagc
2041 gcaagtccct aaagcacagt tacagtattc cagcagactc aaatacaaga acctactgct
2101 aatgccacca ctaccactgc caccactgat gaattaaaaa cagtgcacaa agaccgtatg
2161 gaagacatta aaatattgat tgcattctca tctcctaccc acatacataa agaaactact
2221 agtgccacat catcaccata tagagatact caaagtcgga cagcctcacc aaacagagca
2281 ggaaaaggag tcatagaaca gacagaaaaa tctcatccaa gaagccctaa cgtgttatct
2341 gtcgctttga gtcaaaagaa tacagttcct gaggaagaac taaatccaaa gatactagct
2401 ttgcagaatg ctgagagaaa gcgaaaaaat gaacatgatg gttcactttt tcaagcagta
2461 ggaattggaa cattattaca gcagccagac gatcatgcag ctactacatc actttcttgg
2521 aaacgtgtaa aaggatgcaa atctagttaa cagaatggaa tggagcaaaa gacaattatt
2581 ttaataccct ctgatttagc atgtagactg ctggggcaat caatggatga aagtggatta
2641 ccacagctga ccagttatga ttgtgaagtt aatgctccta tacaaggcag cagaaacctt
2701 ctgcaggggt aagaattact cagagctttg gatcaagtta actgagcttt ttcttaattt
2761 cattcctttt tttggacact ggtggctcac tacctaaaagc agtctattta tattttctac
2821 atctaatttt agaagcctgg ctacaatact gcacaaactt ggtagtttca atttttgatc
2881 ccctttctac ttaatttaca ttaatgctct tttttagtat gttctttaat gctggatcac
2941 agacagctca ttttctcagt tttttggtat ttaaaccatt gcattgcagt agcatcattt
3001 taaaaaatgc acctttttat ttattttatt ttggctaggg agtttatccc tttttcgaat

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300

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3061 tattttttaag aagatgccaa tataatTTTT gtaagaaggc agtaaccttt catcatgatc
3121 ataggcagtt gaaaaatTTT tacacctTTT ttttcacatt ttacataaat aataatgctt
3181 tgccagcagc acgtggttagc cacaattgca caatatatTT tcttaaaaaa taccagcagc
3241 tactcatgga atatatcttg cgtttataaa actagtTTTT aagaagaaat tttttttggc
3301 ctatgaaaatt gttaaacctg gaacatgaca ttgttaatca tataataatg attcctaaat
3361 gctgtatggt ttattatttta aatgggtaaa gccatttaca taatatagaa agatatgcac
3421 atatctagaa ggtatgtggc atttatTTTg ataaaattct caattcagag aaatcatctg
3481 atgtttctat agtcactTTg ccagctcaaa agaaaaacaat accctatgta gttgtggaag
3541 tttatgctaa tattgtgtaa ctgatattaa acctaaatgt tctgcctacc ctggtggtat
3601 aaagatattt tgagcagact gtaaacaaaga aaaaaaaaat catgcattct tagcaaaatt
3661 gcctagtagt ttaatttgct caaaatacaa tgtttgattt tatgcacttt gtcgctatta
3721 acatcctTTT tttcatgtag atttcaataa ttgagtaatt ttagaagcat tatttttagga
3781 atatatagtt gtcacagtaa atatcttTgt ttttctatgt acattgtaca aatttttcat
3841 tccttttTgt ctttTgtTgt ggatctaaca ctaactgtat tgttttgtta catcaataa
3901 acatcctTgt tggaaaaaaa aaaaaaaaaa aaa

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## Sequence I.D. No. 10

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MEGAGGANDKKKISSERRKEKSRDAARSRRSKESEVFYELAHQL
PLPHNVSSHLDKASVMRLTISYLRVRKLLDAGDLIEDDMKAQMNC FYLKALDGFVMV
LTDDGDMIIYISDNVNKYMGLTQFELTGHVSFDFTHPCDHEEMREMLTHRNLVKKKGKE
QNTQRSFFLRMKCTLTSGRTMNIKSATWKVLHCTGHIHVYDTNSNQPCGYKKPMT
CLVLICEPIPHPSNIEIPLDSKTFLSRHSLDMKFSYCDERITELMGYPEPEELLGRSIY
EYYHALDSHDLTKTHDMFTKGQVTTGQYRMLAKRGYVWVETQATVIYNTKNSQPQC
IVCVNYVVSGIIQHDLIFSLQQTCEVLKPVESSDMKMTQLFTKVESEDTS SFLDKLKK
EPDALTLAPAAGDTIISLDFGSNDTETDDQQL EEVPLYNDVMLPSPNEKLQINLAM
SPLPTAETPKPLRSSADPALNQEVALKLEPNPESLELSFTMPQIQDQTPSPSDGSTRQ
SSPEPNPSEYCFYVDSDMVNEFKLELVEKLFAEDTEAKNPFSTQD TDLDLEMLAPYI
PMDDDFQLRSFDQLSPLESSSASPESASPQSTVTVFQQTQIQEPTANATTTTATTDDEL
KTVTKDRMEDIKILIASPSPTHIHKETTSATSSPYRDTQSRTASPNRAGKGVIEQTEK
SHPRSPNVLSVALSQRTTVPEEELNPKILALQNAQRKRKMEHDGSLFQAVGIGTLLQQ
PDDHAATTSLSWKRVKGCKSSEQNGMEQKTIILIPSDLACRLLGQSMDESGLPQLTSY
DCEVNAPIQGSRNLLQGEELLRALDQVN

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## MOP2:

## Sequence I.D. No. 2

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1 gcgtctgaac gtctcaaagg gccacagcga caatgacagc tgacaaggag aagaaaagga
61 gtagctcgga gaggaggaag gagaagtccc gggatgctgc gcggtgccgg cggagcaagg
121 agacggaggt gttctatgag ctggcccatg agctgcctct gccccacagt gtgagctccc
181 atctggacaa ggccctccatc atgcgactgg caatcagctt cctgcgaaca cacaagctcc
241 tctcctcagt ttgctctgaa aacgagtcgg aagccgaagc tgaccagcag atggacaact
301 tgtacctgaa agccttgagg ggtttcattg ccgtggtgac ccaagatggc gacatgatct
361 ttctgtcaga aaacatcagc aagttcatgg gacttacaca ggtggagcta acaggacata
421 gtatctttga cttcactcat ccttgcgacc atgaggagat tcgtgagaac ctgagtctca
481 aaaatggctc tggttttggg aaaaaaagca aagacatgtc cacagagcgg gacttcttca
541 tgaggatgaa gtgcacggtc accaacagag gccgtactgt caacctcaag tcagccacct
601 ggaaggctct gcactgcacg ggccagggtg aagtctacaa caactgccct cctcacataa
661 gtctgtgtgg ctacaaggag cccctgctgt cctgcctcat catcatgtgt gaaccaatcc
721 agcacccatc ccacatggac atccccctgg atagcaagac cttcctgagc cgccacagca
781 tggacatgaa gttcacctac tgtgatgaca gaatcacaga actgattggt taccaccctg
841 aggagctgct tggccgctca gcctatgaat tctaccatgc gctagactcc gagaacatga
901 ccaagagtca ccagaacttg tgcaccaagg gtcaggtagt aagtggccag taccggatgc
961 tcgcaaagca tgggggctac gtgtggctgg agaccagggg gacggctatc tacaaccctc
1021 gcaacctgca gccccagtgc atcatgtgtg tcaactacgt cctgagtgag attgagaaga
1081 atgacgtggt gttctccatg gaccagactg aatccctgtt caagccccac ctgatggcca
1141 tgaacagcat ctttgatagc agtggcaagg gggctgtgtc tgagaagagt aacttcctat

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1201 tcaccaagct aaaggaggag cccgaggagc tggcccagct ggctcccacc ccaggagacg  
 1261 ccatcatctc tctggatttc gggaaatcaga acttcgagga gtcctcagcc tatggcaagg  
 1321 ccatcctgcc cccgagccag ccatgggcca cggagttgag gagccacagc acccagagcg  
 1381 aggctgggag cctgcctgcc ttcaccgtgc cccaggcagc tgccccgggc agcaccaccc  
 1441 ccagtgccac cagcagcagc agcagctgct ccacgcccac tagccctgaa gactattaca  
 1501 catctttgga taacgacctg aagattgaag tgattgagaa gctcttcgcc atggacacag  
 1561 aggccaaagga ccaatgcagt acccagacgg atttcaatga gctggacttg gagacactgg  
 1621 caccctatat ccccatggac ggggaaggct tccagctaag ccccatctgc cccgaggagc  
 1681 ggctcttggc ggagaaccca cagtccaccc cccagcactg cttcagtgcc atgacaaaca  
 1741 tcttccagcc actggccccct gtagcccccgc acagtcacctt cctcctggac aagtttcagc  
 1801 agcagctgga gagcaagaag acagagcccg agcgccggcc catgtcctcc atcttctttg  
 1861 atgcccgaag caaagcatcc ctgccaccgt gctgtggcca ggccagcacc cctctctctt  
 1921 ccatgggggg cagatccaac acccagtggc cccagatcc accattacat tttggggcca  
 1981 caaagtgggc cgtcggggat cagcgcacag agttcttggg agcagcgccg ttggggcccc  
 2041 ctgtctctcc accccatgtc tccaccttca aaacaaggct tgcaaagggt tttggggctc  
 2101 gagggccaaa cgtgctgagt ccggccatgg tagccctctc caacaagctg aagctgaagc  
 2161 gacagctgga gtatgaaaag caagccttcc aggacccgag cgggggggac ccacctggtg  
 2221 gcagcacctc acatttgatg tggaaacgga tgaagaacct caggggtggg agctgccctt  
 2281 tgatgccgga caagccactg agcgcaaatg tacccaatga taagctcacc caaaactcca  
 2341 tgaggggccc gggccatccc ctgagacatc tgccgctgcc acagcctcca tctgccatca  
 2401 gtcccgggga gaacagcaag agcaggttcc cccacagtg ctacgccacc cagtaccagg  
 2461 actacagcct gtcgtcagcc cacaaggtgt caggcatggc aagccggctg ctcgggcccc  
 2521 catcttgagt ctacctgctc ccgcaactga ccagatatga ccgtgaggtg aaagtgcccg  
 2581 tgctgggaag ctccacgctc ctgcaaggag gggacctcct cagagccctg gaccaggcca  
 2641 cctgagccag gcttctacct gggcagcacc tctgccgacg ccgtcccacc agcttcactc  
 2701 tctccgtctg tctttgcaac taggtatttg

## Sequence I.D. No. 11

MTADKEKKRSSERRKEKSRDAARCRRSKETEVFYELAHPLP  
 HSVSSHLDKASIMRLAISFLRTHKLLSSVCSENESEAEADQMDNLYLKALEGFIAVV  
 TQDGDMIFLSENISKFMGLTQVELTGHSIFDFTHPCDHEEIRENLSLKNGSGFGKKS  
 QMSTERDFFMRMKTCTVTNRGRTVNLKSATWKVLHCTGQVKVYNNCPPHNSLCGYKEPL  
 LSLIIMCEPIQHPSHMDIPLDSKTFLSRHSMDMKFTYCDRITELIGYHPEELLGRS  
 AYEYFHALDSENMTKSHQNLCTKGQVVSGQYRMLAKHGGYVWLETQGTVIYNPRNLQP  
 QCIMCVNYVLSEIEKNDVVFSMDQTESLFKPHLMAMNSIFDSSGKAVSEKSNFLFTK  
 LKEEPEELAQLAPTPGDAIISLDFGNQNFEESSAYGKAILPPSQPWATELRSHSTQSE  
 AGSLPAFTVPQAAAPGSTTPSATSSSSSCSTPNSPEDYYTSLDNDLKIEVIEKLFAMD  
 TEAKDQCSTQTDNFELDLETLAPYIPMDGEGFQLSPICPEERLLAENPQSTPQHCFSA  
 MTNIFQPLAPVAPHSPFLLDKFQQQLESKKTEPERRPMSSIFFDAGSKASLPPCCGQA  
 STPLSSMGGRSNTQWPPDPPLHFGPTKWAVGDQRTEFLGAAPLGPPVSPPHVSTFKTR  
 SAKGFGARGPNVLSAMVALSNKLLKLRQLEYEKQAFQDPSGGDPPGGSTSHLMWKRM  
 KNLRGGSCPLMPDKPLSANVPNDKLTQNSMRGLGHPLRHLPLPQPPSAISPGENSKSR  
 FPPQCYATQYQDYSLSAHKVS GMASRLLGPSFESYLLPELTRYDREVKVPVLGSSTL  
 LQGGDLLRALDQAT

## MOP3:

## Sequence I.D. No. 3

1 ggagatgagc aaggaggccg tgagcctgtg ggcgcctcact gtgtccctcc aacccccagt  
 61 ccccttggtg gtctgcagag agatgacagg atcaggcaga agaaaacagc aatgtgtaac  
 121 tttgccattc atctccagag aattatgttt ttatcttttg ctttttcctc cccccagggt  
 181 agaataataca gaacaccaag gagggataaa aaatgcaagg gaagctcaca gtcagattga  
 241 aaagcggcgt cgggataaaa tgaacagttt tatagatgaa ttggcttctt tggtagcaac

301 atgcaacgca atgtccagga aattagataa acttactgtg ctaaggatgg ctgttcagca  
 361 catgaaaaca ttaagaggtg ccaccaatcc atacacagaa gcaaactaca aaccaacttt  
 421 tctatcagac gatgaattga aacacctcat tctcagggca gcagatggat ttttgtttgt  
 481 cgtaggatgt gaccgagggga agatactctt tgtctcagag tctgtcttca agatcctcaa  
 541 ctacagccag aatgatctga ttgggtcagag tttgtttgac tacctgcac ctaaaagatat  
 601 tgccaaagtc aaggagcagc tctcctcctc tgacaccgca ccccggggagc ggctcataga  
 661 tgcaaaaact ggacttccag ttaaaacaga tataaccctt gggccatctc gattatgttc  
 721 tggagcacga cgttctttct tctgtaggat gaagtgtaac aggccttcag taaaggttga  
 781 agacaaggac ttccccctcta cctgctcaaa gaaaaaagca gatcgaaaaa gcttctgcac  
 841 aatccacagc acaggctatt tgaaaagctg gccaccacca aagatggggc tggatgaaga  
 901 caacgaacca gacaatgagg ggtgtaacct cagctgcctc gtcgcaattg gacgatgca  
 961 ttctcatgta gttccacaac cagtgaacgg ggaaatcagg gtgaaatcta tggaaatagt  
 1021 ttctcggcac gcgatagatg gaaagtttgt tttttagac cagagggcaa cagctatttt  
 1081 ggcataattta ccacaagaac ttctaggcac atcgtgttat gaatattttc accaagatga  
 1141 cataggacat cttgcagaat gtcataggca agttttacag acgagagaaa aaattacaac  
 1201 taattgctat aaatttaaaa tcaaagatgg ttcttttatc acactacgga gtcgatgggt  
 1261 cagtttcatg aacccttgga ccaaggaaagt agaatatatt gtctcaacta acactgttgt  
 1321 tttagccaac gtcctggaag gcgggggacc aaccttccca cagctcacag catcccccca  
 1381 cagcatggac agcatgctgc cctctggaga aggtggccca aagaggacc accccactgt  
 1441 tccagggatt ccagggggaa cccgggctgg ggcaggaaaa ataggccgaa tgattgctga  
 1501 ggaaatcatg gaaatccaca ggataagagg gtcattgcgt tctagctgtg gctccagccc  
 1561 attgaacatc acgagtacgc ctccccctga tgcctcttct ccaggaggca agaagatttt  
 1621 aaatggaggg actccagaca ttccctccag tggcctacta tcaggccagg ctcaggagaa  
 1681 cccagggttat ccatattctg atagttcttc tattcttggt gagaaccccc acataggtat  
 1741 agacatgatt gacaacgacc aaggatcaag tagtcccagt aatgatgagg cagcaatggc  
 1801 tgtcatcatg agcctcttgg aagcagatgc tggactgggt ggccctgttg acttttagtga  
 1861 cttgccatgg ccgctgtaaa cantacatgt tgctttggca acagcctata gtatcaaagt  
 1921 gcattactgg tggagtttta cagtctgtga agcttactgg ataaggagag aatagctttt  
 1981 atgtactgac ttcataaaaag ccatctcaga gccattgata caagtcaatc ttactatatg  
 2041 taacttcaga caaagtggaa ctaagcctgc tccagtgttt cctcatcatt gattattggg  
 2101 ctagctgtgg atagcttgca ttaattgtat attttggatt ctgtttgtgt tgaatttttt  
 2161 aatcattgtg cacagaagca tcattggtag cttttatatg caaatgggtca tttcagatgt  
 2221 atggtgtttt tacactacaa agaagctccc catgtggata tttcttatac taattgtatc  
 2281 ataaagccgt ttattcttcc ttgtaagaat cctttactat aaatatgggt taaagtataa  
 2341 tgtactagac agttaaatat ttttaataaa tgtttccctt gttctataaa aaaaaaaaaa  
 2401 aaaaaaaaaa aanattcgtg cggccgctag

Sequence I.D. No. 12

MSKEAVSLWALTVSLQPPVPLCVCREMTGSGRRKQQCVTLPPFIS  
 RELCFYLLLFPPPRLEYTEHQGGIKNAREAHSQIEKRRRDKMNSFIDELASLVPTCNA  
 MSRKLDKLTVLRMAVQHMKTLRGATNPYTEANYKPTFLSDDELKHLILRAADGFLFVV  
 GCDRGKILFVSESVFKILNYSQNDLIGQSLFDYLHPKDIKVKEQLSSSDTAPRERLI  
 DAKTGLPVKTDITPGPSRLCSGARRSFFCRMKNRPSVKVEDKDFPSTCSKKKADRKS  
 FCTIHSTGYLKS WPPTKMGLDEDNEPDNEGCNLSCLVAIGRLHSHVVPQPVNGEIRVK  
 SMEYVSRHAIDGKFVFDQRATAILAYLPQELLGTSCYEYFHQDDIGHLAECHRQVLQ  
 TREKITTNCYKFKIKDGSFITLSRWFSFMNPWTKEVEYIVSTNTVVLANVLEGGDPT  
 FPQLTASPHSMDSMLPSGEGGPKRTHPTVPGIPGGTRAGAGKIGRMIAEEIMEIHRIR  
 GSLRSSCGSSPLNITSTPPPDASSPGGKKILNGGTPDIPSSGLLSGQAQENPGYPYSD  
 SSSILGENPHIGIDMIDNDQSSSSPSNDEAAMAVIMSLLEADAGLGGPVDFSDLPWPL

MOP4:

Sequence I.D. No. 4

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1 gaattccggg ccggaataaac tgcataagaaa atttaaatgga tgaagatgag aaagacagag
61 ccaagagagc ttctcgaatac aagtctgaga agaagcgtcg ggaccagttc aatgttctca
121 tcaaagagct cagttccatg ctccctggca acacgcggaa aatggacaaa accaccgtgt
181 tggaagaggt catcggaattt ttgcagaaac acaatgaagt ctacgcgcaa acggaaatct
241 gtgacattca gcaagactgg aagccttcac tcctcagtaa tgaagaattc acccagctga
301 tgttgagggc attagatggc ttcattatcg cagtgcacaac agacggcagc atcatctatg
361 tctctgacag tatcacgcct ctccctgggc atttaccgtc ggatgtcatg gatcagaatt
421 tggttaaat tctcccagaa caagaacatt cagaagttaa taaaatcctt tcttcccata
481 tgcttgtagc ggattccccc tcccagaaat acttaaaatc tgacggcgat ttagagtttt
541 attgccatct tctcagaggc agcttgaacc caaaggaatt tccaacttat gaatacataa
601 aatttgtagg aaattttcgc tcttacaaca atgtgcctag cccctcctgt aatggttttg
661 acaacaccct ttcaagacct tgccgggtgc cactaggaaa ggaggtttgc ttcattgccca
721 ccgttcgtct ggcaacacca caattcttaa aggaaatgtg catagttgac gaacctttag
781 aggaattcac ttcaaggcat agcttggaaat ggaaattttt atttctggat cacagagcac
841 ctccaatcat aggatacctg ccttttgaag tgctgggaac ctacggctat gactactacc
901 acattgatga cctggagctc ctggccagggt gtcaccagca cctgatgcag ttgggcaaag
961 ggaagtcgtg ttgctaccgg tttctgacca aaggtcagca gtggatctgg ctgcagactc
1021 actactacat cacctaccat cagtggaaact ccaagcccga gttcatctgt tgcacacact
1081 cggtgggtcag ttacgcagat gtccgggtgg aaaggaggca ggagctggct ctggaagacc
1141 cgccatccga ggccctccac tcctcagcac taaaggacaa gggctcaagc ctggaacctc
1201 ggcagcactt taacgcactc gacgtgggtg cctcgggcct taataccagt cattcgccat
1261 cggcgtcctc aagaagtcc cacaatcct cgcacacagc catgtcagaa cccacctcca
1321 ctcccaccaa gctgatggca gaggccagca ccccggttt gccaatgca gccacctgc
1381 cccaagagtt acctgtcccc gggctcagcc aggcagccac catgcggcc cctctgctt
1441 ccccatcgtc ctgacacctc acacagcagc tcctgcctca gaccgttctg cagagcacgc
1501 ccgctcccat ggcacagttt tcggcacagt tcagcatgtt ccagaccatc aaagaccagc
1561 tagagcagcg gacgcggatc ctgcaggcca atatccggtg gcaacaggaa gagctccaca
1621 agatccagga gcagctctgc ctggctcagg actccaacgt ccagatgttc ctgcagcagc
1681 cagctgtatc cctgagcttc agcagcacc agcgacctga ggctcagcag cagctacagc
1741 aaaggtcagc tgcagtgact cagccccagc tcggggcggg cccccaactt ccagggcaga
1801 tctcctctgc ccaggtcaca agccagcacc tgctcagaga atcaagtgtg atatcaaccc
1861 aggttccaaa gccaatgaga agctcacagc taatgcagag cagcgccgc tc

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Sequence I.D. No. 13

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MDEDEKDRAKRASRNKSEKKRRDQFNVLIELSSMLPGNTRKMD
KTTVLEEVIGFLQKHNEVSAQTEICDIQQDWKPSFSLNNEFTQLMLEALDGFIIAVTT
DGSIIYVSDSITPLLGHLPSDVMQDNLNLFPEQEHSEVYKILSSHMLVTDSPSPEYL
KSDGDLEFYCHLLRGS LNPKEFPTYEYIKFVGNFRSYNNVPSPPSCNGFDNTLSRPCR
VPLGKEVCFIATVRLATPQFLKEMCIVDEPLEEFTSRHSLEWKFLFLDHRAPPIIGYLP
FEVLGTSGYDYHIDDLLELLARCHQHLMQFGKGKSCCYRFLTKGQQWIWLQTHYYITY
HQWNSKPEFIVCTHSVVSADVRVERRQELALEDPPEALHSSALKDKGSSLEPRQHF
NALDVGASGLNTSHSPSASSRSSHKSHTAMSEPTSTPTKLMAEASTPALPRSATLPQ
ELPVPGLSQAATMPAPLPSPSSCDLTQQLLPQTVLQSTPAPMAQFSAQFSMFQTIKDQ
LEQRTRILQANIRWQQEELHKIQEQLCLVQDSNVQMFLQQPAVSLFSSTQRPQAQQQ
LQQRSAAVTQPQLGAGPQLPGQISSAQVTSQHLRESSVISTQGPKPMRSSQLMQSSG
RS

```

MOP5:

Sequence I.D. No. 5

```

1 gaattcccg agaccagcgc tgcgggcccgc ggcggctggg gcgaggccag ctggcgccc
61 cggtctcag cccccagagc agcacctggg aggtcacatc ttgcagtcct tggatggctt
121 tgtgttcgcc ttgaaccagg aaggaaaatt cctctacatc tcagagacag tctccatcta

```

181 tctgggtctc tcacaggttg agatgacggg cagcagcgtc ttcgactaca ttcaccctgg  
241 ggaccactca gaggtgctgg agcaactggg gctgcggaag ccgacgccc gcccccaac  
301 cccgccctcc gtctcctctt cctcctcctc ttctctctcg cttgcagata cccccgagat  
361 cgaggccagc ctcaccaagg tgccccctc ctccctgggc caggagcgt ccttctttgt  
421 ccgcatgaaa tccacgctca ccaagagggg gctgcacgtc aaggcctcag ggtacaaggt  
481 catccacgtg actgggcgcc ttcggggcca cgccctgggc cttgtggccc tcgggcacac  
541 gttgcccccg gccccctgg ctgagctgcc actccatgga cacatgatcg tcttcctgtc  
601 cagcctgggt ctcaccatcc ttgcttgtga gagcagagtc agcgaccaca tggacctggg  
661 gccctcagag ctggtggggc gcagctgcta ccagtttgtc cacggacaag acgccacgag  
721 gatccgccag agccacgtgg acttgctgga caagggtcag gtgatgactg gttactaccg  
781 ttggtgagc cgtgccgggg gcttcgtgtg gctgcagctc gtggccacag tggctgggag  
841 cgggaagagc cccggggagc accatgtgct ttgggtcagc cacgtgctca gccaaagcca  
901 ggggtggcaa actcctttgg atgccttcca gcttcagcc agcgtggcct gtgaggaggc  
961 atccagcccc gggccagagc ccacagagcc ggagcctccg acggaaggga agcaggctgc  
1021 cccagcggag aacgaggccc cccagaccca gggcaaacgc atcaaagtgg agcccgccc  
1081 gagggaaacc aaaggctccg aggacagtgg cgacgaggat ccctccagcc acccgcccac  
1141 accgaggccc gagttcacct ctgtcatccg ggcaggggtc ctgaagcagg atccggtgcg  
1201 gccatggggc ctggcgccct cgggggacct cccgcccacc ctctgcacg cgggcttct  
1261 gccgcgggtg gtgcggggcc tgtgcacacc cggcaccatc cgctacggcc ccgaggagct  
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1381 ttaccgccc ctgggcctgc cctaccggg gcccgcgggc accaggctgc cgcggaaggg  
1441 ggactgagga ctggcagagc tgccggcgcc ggacctgcg acaaccggg tccccagga  
1501 cagtaggccc ggctctgccc gtagccctga gaattaaacg ccggctctcc ctgcaaaaaa  
1561 aaaaaaaaaa aaatttctg c

## Sequence I.D. No. 14

NSRRPALRAAAAAGARPAGGPGSQPPEQHLGGHILQSLDGFVFAL  
NQEGKFLYISETVSIYLGSLQVEMTGSSVFDYIHPGDHSEVLEQLGLRTPTPGPPTPP  
SVSSSSSSSSSLADTPEIEASLTKVPPSSLVQERSFFVRMKSTLTKRGLHVKASGYKV  
IHVTGRLRAHALGLVALGHTLPPAPLAELPLHGHMIVFRLSLGLTILACESRVSDHMD  
LGPSELVGRSCYQFVHGQDATRIQSHVDLLDKGQVMTGYRRLQRAGGFVWLQSVAT  
VAGSGKSPGEHHVLWVSHVLSQAEGGQTPLDAFQLPASVACEEASSPGPEPTEPEPPT  
EGKQAAPAENEAPQTQKRIKVEPGPRETKGSEDSGDEDPSHPATPRPEFTSVIRAG  
VLKQDPVRPWGLAPPGDPPPTLLHAGFLPPVVRGLCTPGTIRYGAELGLVYPHLQRL  
GPGPALPEAFYPPLGLPYPGPAGTRLPRKGD

## MOP6 :

SEQ ID NO:6 (MOP6 cDNA)

CCACGCGTCCGACGCCCCCACC CGGGAGGGGGAGAGAGGCCAAAAAGTAAGAGAGGAAAAAATAGC  
AGGAAGATGGCGCCACCAAGCCAGCTTTCAGCAGGATCCTTCCAGGCGAGAACGTTTACAAGCATTG  
AGAAAGGAGAAATCCCGAGATGCTGCTCGCTCCCGCCGGGGAAAAAGAAACTTTGAGTTCTATGAATTG  
GCCAAGTTGTTGCCTCTTCTGTCAGCCATTACCAGCCAGCTCGACAAGGCATCCATCATTGACTTACA  
ATTAGCTATCTGAAATGAGGGACTTTGCTAACCAGGGGGACCTCCGTGGAAGTTGCGAATGGAAGGC  
CCTCCACCTAACACATCAGTAAAAGGTGCACAGCGAAGGAGAAGCCCCAGTGCCTAGCCATTGAAGTA  
TTTGAAGCACATTTGGGAAGCCACATTTTGCAGTCCCTGGATGGCTTTGTATTTGCACTAAATCAGGAA  
GGAAAATTTTGTACATTTCCGAAACAGTCTCCATCTACCTAGGCCTCTCACAAGTGGAGCTGACAGGC

AGCAGTGTCTTTGACTATGTCCACCCCGGAGATCACGTGGAGATGGCTGAGCAGCTGGGCATGAAGCTC  
CCCCCTGGGCGGGGTCTCCTGTCACAGGGCACTGCTGAGGACGGAGCCAGCTCAGCATCTTCTCCTCT  
CAGTCGGAGACCCCCGAGCCAGTGGAGTCAACCAGCCCCAGTCTGCTAACCCTGACAACACTCTTGAG  
CGTTCTTTTTTTCATCCGAATGAAATCTACTCTGACCAAACGCGGTGTGCACATCAAATCATCAGGATAT  
AAGGTGATTACATAACAGGCCGGCTACGCCTGAGAGTGTGCTGTCCCACGGGAGGACCGTCCCCAGC  
CAAATCATGGGTCTCGTGGTTGTTGCGCATGCCTTGCTCCCCCTACGATCAATGAAGTCAGAATTGAC  
TGCCATATGTTGCTCACTCGAGTAAATATGGACCTCAATATCATTTACTGTGAAAATAGGATTAGTGAT  
TATATGGATCTGACCCCTGTAGATATCGTAGGGAAGAGATGCTACCACTTCATCCATGCTGAAGACGTG  
GAGGGCATCAGGCACAGTCACTTGGACTTGCTGAATAAGGGTCAGTGTGTGACAAAGTACTATCGCTGG  
ATGCAGAAGAACGGAGGATATATTTGGATACAGTCCAGTGCCACCATAGCTATTAATGCCAAGAATGCA  
AATGAAAAGAATATCATCTGGGTGAATTACCTTCTTAGCAATCCTGAGTACAAGGACACACCCATGGAC  
ATCGCACAGCTCCCCATCTGCCGGAGAAAACCTCCGAATCCTCGGAGACATCCGACTCTGAGTCAGAC  
TCTAAAGACACCTCAGGTATTACAGAGGACAACGAGAACTCCAAGTCCGACGAGAAGGGGAACCAAGTCC  
GAGAACAGCGAAGACCCGGAGCCCGACCGGAAGAAGTCGGGCAACGCGTGTGACAACGACATGAACTGC  
AACGACGACGGCCACAGCTCCAGTAACCCGGACAGCCGCGACAGCGACGACAGCTTCGAGCACTCGGAC  
TTTGAGAACCCCAAGGCGGGCGAGGACGGCTTCGGTGCTCTGGGCGCGATGCAGATCAAGGTGGAGCGC  
TACGTGGAGAGCGAGTCCGACCTGCGGCTGCAGAACTGCGAGTCACTCACGTCCGACAGCGCCAAGGAC  
TCGGACAGCGCAGGCGAGGCGGGCGCGCAGGCCTCCAGCAAGCACCAGAAGCGCAAGAAAAGGCGGAAA  
CGGCAAAAGGGCGGCAGCGCCAGCCGCGCGCTGTCCAGCGCGTTCGAGCCCAGGCGGCCTGGACGCG  
GGCCTGGTGGAGCCCCCGCGGCTGCTGTCTCCCCAACAGTGCCTCGGTGCTCAAGATCAAGACGGAG  
ATCTCAGAACCCATCAATTTGACAATGACAGCAGCATCTGGAATACCCGCCCAACCGGGAGATCTCC  
AGGAACGAGTCCCCCTACAGCATGACCAAGCCCCCAGCTCTGAGCACTTCCCGTCCCCGAGGGCGGC  
GGCGGTGGGGGTGGCGGTGGCGGGGGGCTGCACGTGGCCATTCCCGACTCGGTCTCACSCCGCCCGGC  
GCCGACGGC

SEQ ID NO:15 (MOP6 protein)

MAPTKPSFQODPSRRERLQALRKEKSRDAARSRRGKINFYELAKLLPLPAITSQLDKASIIRLTIS  
YLKMRDFANQGDPPWNLRMGPPPNSTSVKGAQRRRSPSALAIEVFEAHLGSHILQSLDGFVFALNQEGK  
FLYISETVSIYLGSLQVELTGSSVFDYVHPGDHVEMAEQLGMKLPPGRLLSQGTAEDGASSASSSSQS  
ETPEPVESTSPSLTTDNTLERSFFIRMKSTLTKRGVHIKSSGYKVIHITGRLRLRVSLSHGRTVPSQI  
MGLVVVAHALPPPTINEVRIDCHMFVTRVNMDLNIICYENRISDYMDLTPVDIVGKRCYHFIHAEDVEG  
IRHSHDLLNKGQCVTKYYRWMQKNGGYIWIQSSATIAINAKNANEKNIWVNYLLSNPEYKDTMPMDIA  
QLPHLPEKTSESSETSSESSESKDTSGITEDNENSKSDEKGNQSENSEDPEPDRKKSGNACDNDMNCND  
DGHSSSNPDSRSDSDSFHSDFENPKAGEDGFGALGAMQIKVERYVESESDLRLQNCESLTSDSAQSD  
SAGEAGAQAASSKHQKRKKRRRQKGGASRRRLSSASSPGGLDAGLVEPPRLLSSPNSASVLKIKTEIS  
EPINFNDNDSSIWNYPNREISRNEPYSMTKPPSSEHFPSPOGGGGGGGGGLHVAIPDSVLTPPGAD  
G

**MOP7 :**

Sequence I.D. No. 7 (Mouse mop7 cDNA sequence), total 2207 nucleotides):

```
1 agctaagtcc cggagaggac agagggcctt aggcacacaa cctaggggag aagcctggag
61 caaagcccca cagggagggc cacatggact gggaccaaga caggtcgaac accgagctgc
121 ggaaggagaa gtcgcgggac gcggcccgca gccggcgag ccaggagacg gaggtgctgt
181 accagctggc gcacactctg ccctttgcgc gcggcgtag cgcgacactg gacaaggcct
241 ccatcatgcg cctcacaatc agctacctgc gcatgcaccg cctctgcgca gcaggggagt
301 ggaaccaggt ggaaaaaggg ggagagccac tggacgcctg ctacctgaag gccctggagg
361 gtttcgtcat ggtactcacc gccgagggag acatggctta cctgtcggaa aatgtcagca
421 agcacctggg cctcagtcag ctggagctca ttggacacag tatctttgat tttatccatc
481 cctgtgacca agaggaactt caagacgccc tgacccccag gccgaacctg tcaaagaaga
541 agctggaagc cccaacagag cgccactttt ccctgcgaat gaagagcacg ctcaccagca
601 gagggcgcac gctcaacctc aaagcggcca cctggaaggt gctgcaactg tcaggacata
661 tgagggccta caagccccct gcacagactt cccctgccgg gagccctcgc tccgagcctc
721 ccctgcaatg cctggtgctt atctgtgaag ccatcccca cccagccagt ctggagcccc
781 cgctgggccc aggggccttt ctcagtcgcc acagcctgga catgaagtgc acatactgcg
841 acgagaggat tgcagaagtt gctggctaca gtccctgatga cctgattggc tgttctgcct
901 atgaatacat ccacgctttg gactctgatg cggtcagcag gagcatccac actttgttga
961 gcaagggcca ggcagtaacg gggcagtatc gcttcctggc ccggactgga ggctatctgt
1021 ggactcagac tcaggctaca gtggtgtcag gggggcgggg cccccagtcg gaaagtatca
1081 tctgcgtcca cttcctgatc agccgtgtag aagagaccgg agtgggtgctg tctctggaac
1141 aaacggagca acatactcgc agacccccctc ggctgagtgc ctccctgcag aagggtatcc
1201 ctggcaacag tgtagactct cctgctccgc ggatcctggc cttcctgcac cctccggccc
1261 tgagtgaggc ctccctggct gctgaccctc gccgtttctg tagtccagac ctgcgccgcc
1321 tcatggcacc catcctggat ggacctcccc cagctgccac gccagcacc ccacaagcta
1381 cacggagacc ccaaagtcct cttccggctg atctcccaga taagttggca gtgggcttgg
1441 aaaatgcgca cagactctcc actgcccaga aaaacaagac cgtggagaca gatctagata
1501 tagctcagga ctctgacact ctggacttgg agatgctggc cccctacatc tccatggatg
1561 atgaattcca gctcaactcc agtgagcaat tgcccaaagt ccaccgcaga cctcccaggg
1621 tggcccgtag gccccgtgct cggagcttcc atggcctgtc gctcctatc cctgagccct
1681 ccctactgcc ccgctggggg agtgatccac gactgaactg ttccagtcct tccaggggag
1741 atgccccac agcctccctg atgcctggaa ctcggaagag ggccttggcc cagagctcag
1801 aggacaaagg gttggagctg ctggaaatta agcctcccaa gcggtcccca agactagaac
1861 ctggaagctt cctgctgcct ccgctcagcc tgagtttcct tctgcaaggt cgacaactcc
```



1921 tgggaaacca gcaggatccc agagcccccc tcgtgcattc tcatgagccc ttgggcctag  
1981 ctccctcgct gctctctctc tgccagcatg aggaaactgt ccagcccagg aaccacttcc  
2041 cgccagcagc aggcttgggc cagacccact gagtcagcct tcctctaagc cctcttcttc  
2101 tatcccagaa aggactcagc cacactccac accagcagcc tacacccagg atggggcctc  
2161 tctcctctga gtgtgcccc cccagccag ccacagtcct acctcag

Sequence I.D. No. 16 (Mouse mop7 protein sequence), total 662 amino acids)

MDWDQDRSNT ELRKEKSRDA ARSRRSQETE VLYQLAHTLP FARGVSAHLD  
KASIMRLTIS YLRMHLCAA GEWNQVEKGG EPLDACYLKA LEGFVMVLTA  
EGDMAYLSEN VSKHLGLSQL ELIGHSIFDF IHPCDQEELQ DALTPRPNLS  
KKKLEAPTER HFSLRMKSTL TSRGRTLNLK AATWKVLHCS GHMRAYKPPA  
QTSPAGSPRS EPPLQCLVLI CEAIPHPASL EPPLGRGAFL SRHSLDMKFT  
YCDERIAEVA GYSPDDLIGC SAYEYIHALD SDAVSRSIHT LLSKGQAVTG  
QYRFLARTGG YLWTQTQATV VSGGRGPQSE SIICVHFLIS RVEETGVVLS  
LEQTEQHTRR PPRLSASSQK GIPGNSVDSP APRILAF LHP PALSEASLAA  
DPRRFCSPDL RRLMAPILDG PPPAATPSTP QATRRPQSPL PADLPDKLAV  
GLENAHRLST AQKNKTIVETD LDIAQDSDTL DLEMLAPYIS MDDDFQLNSS  
EQLPKVHRRP PRVARRPRAR SFHGLSPPIP EPSLLPRWGS DPRLNCSSPS  
RGDRPTASLM PGTRKRALAQ SSEDKGLELL EIKPPKRSPR LEPGSFLLPP  
LSLSFLLQGR QLLGNQQDPR APLVHSHEPL GLAPSLLSLC QHEETVQPRN  
HFPPAAGLGQ TH

**MOP8:**

Sequence I.D. No. 8

1 gtggtcgagc cgcgcgcagg gtgcgctcgt ttgaactgcg gtgacaccga gggttgggga  
61 ctcgaaacccc cgcttcgcag ctccaggagcc tgagggtccga aagcttcggt ccagagccca  
121 gcatgaatgg atacgcggaa tttccgccca gccccagtaa cccacccaag gagcccgtgg  
181 agccccagcc cagccaggtc ccactgcagg aagatgtgga catgagcagt ggctccagtg  
241 gacatgagac caacgaaaac tgctccacgg ggcgggactc gcagggcagt gactgtgacg  
301 acagtgggaa ggagctgggg atgctgggtg agccaccgga tgcccgccag agtccagata

361 ccttttagcct gatgatggca aaatctgaac acaaccatc tacaagtggc tgcagtagcg  
421 accagtcttc gaaagtggac acacacaaag aactgataaa aactactaaag gagctgaagg  
481 tccacctccc tgcagacaag aaggccaagg gcaaggccag tacgctggcc accttgaagt  
541 acgcccctcag gagcgtgaag caggtgaaag ccaatgaaga gtattaccag ctgctgatgt  
601 ccagcgaggg tcacccctgt ggagcagacg tgccctccta caccgtggag gagatggaga  
661 gcgttacctc tgagcacatt gtgaagaatg ccgatatgtt tgcggtggcc gtgtccctgg  
721 tgtctgggaa gatcctgtac atctctgacc aggttgcatc catatttcac tgtaaaagag  
781 atgccttcag cgatgccaag tttgtggagt tcctggcgcc tcacgatgtg ggctgttcc  
841 acagtttcac ctccccgtac aagcttcctt tgtggagcat gtgcagtgga gcagattctt  
901 ttactcaaga atgcatggag gagaaatctt tcttttgccg tgtcagtgtc cggaaaagcc  
961 acgagaatga aatccgctac cacccttcc gcatgacgcc ctacctggtc aaggtgcggg  
1021 accaacaagg tgctgagagt cagctttgct gccttctgct ggcagagaga gtgcactctg  
1081 gttatgaagc ccctagaatt cctcctgaaa agagaatttt tacaaccacc catacaccaa  
1141 attgtttgtt ccaggatgtg gatgaaagg cggtccctct cctgggctac ctacctcagg  
1201 acctgattga aacccagtg ctctgacgc tccacctag tgacaggccc ttgatgctgg  
1261 ccatccacaa aaagatcctg cagtcaggcg ggcagcctt cgactattct cccattcggg  
1321 ttcgcgcccc gaacggagag tacatcacgt tggacaccag ctggtccagc ttcattcaacc  
1381 catggagcag gaaaatctcc ttcattctg ggaggcaca agtcagggtg ggcccttga  
1441 atgaggacgt gtttgacgac caccctgca cagaggagaa ggccctgcac ccagcattc  
1501 aggagctcac agagcagatc caccggctcc tgctgcagcc cgccccccac agcggctcca  
1561 gtggctacgg gagtctgggc agcaacgggt cccacgagca ccttatgagc cagacctcct  
1621 ccagcgacag caacggccat gaggactcac gccggaggag agccgaaatt tgtaaaaatg  
1681 gtaacaagac caaaaataga agtcattatt ctcatgaatc tggagaacaa aagaaaaaat  
1741 ccgttacaga aatgcaaact aatccccag ctgagaagaa agctgtccct gccatggaaa  
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1861 cctaccagca gatcagctgc ttggacagcg tcatcaggta cttggagagc tgcaatgagg  
1921 ctgccacct gaagaggaaa tgcgagttcc cagcaaactg cccagcgcta aggtccagt  
1981 ataagcggaa ggccacagtc agcccagggc cacacgctgg agaggcagag ccgccctcca  
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2101 cagagagtgt ggcgtcgctc accagccagt gcagctacag cagcaccatc gtccatgtgg  
2161 gagacaagaa gccgcagccg gagttagaga tgggtgaaga tgctgcgagt gggccagaat  
2221 ccctggactg cctggcgggc cctgccctgg cctgtggtct cagccaagag aaggagccct  
2281 tcaagaagct gggcctcacc aaggaggtac tcgctgcaca cacacagaag gaggagcaga  
2341 gcttcctgca gaagttcaaa gaaataagaa aactcagcat tttccagtcc cactgccatt  
2401 actacttgca agaaagatcc aaggggcagc caagtgaacg aactgccccct ggactaagaa  
2461 atacttccgg aatagattca ccttggaata aaacaggaaa gaacagaaaa ttgaagtcca  
2521 agcgggtcaa acctcgagac tcatctgaga gcaccggatc tggggggccc gtgtccgccc  
2581 ggcccccgct ggtgggcttg aacgccacag cctggtcacc ctccagacag tcccagtcca

2641 gctgcccagc cgtgcccttt cccgccccag tgccagcagc ttattcactg cccgtgtttc  
2701 cagcgccagg gactgtggca gcacccccgg cacctcccca cgccagcttc acagtgcctg  
2761 ctgtgcccgt ggacctccag caccagtttg cagtccagcc cccacctttc cctgccccctt  
2821 tggcgccctgt catggcattc atgctaccca gttattcctt cccctcgggg accccaaacc  
2881 tgccccaggc cttcttcccc agccagcctc agtttccgag ccacccaca ctcacatccg  
2941 agatggcctc tgcctcacag cctgagttcc ccagccggac ctcgatcccc agacagccat  
3001 gtgcttgtcc agccaccgg gccaccccac catcggccat gggtagggcc tccccaccgc  
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3361 gctcactggg ctgcgacgcc tccccgagt gggcaggcag tagtgacaca agtcatacca  
3421 gcaaataatt tggaagcatt gactcctcag agaataatca caaagcaaaa atgaacactg  
3481 gtatggaaga aagtgagcat ttcattaagt gcgtcctgca ggatcccatc tggctgctga  
3541 tggcagatgc ggacagcagc gtcatgatga cgtaccagct gccttcccga aatttagaag  
3601 cggttttgaa ggaggacaga gagaagctga agctcctaca gaaactccag ccaggttcac  
3661 ggagagtcat aagcaggagc tgcgcgaggt ccaccagtgg atgcagacgg gcggcctgcc  
3721 cgcagccatc gacgtggcag aatgtgttta ctgtgaaaac aaggaaaaag gtaatatttg  
3781 cataccatat gaggaagata ttccttctct gggactcagc gaagtgtcgg acaccaaaga  
3841 agacgaaaat ggatccccct tgaatcacag gatcgaagag cagacgtaac ccctgcccc  
3901 cctcagcccg gcagccagcg aggtacacca ggtggtgctt ggaagagatg aaagatcttc  
3961 atggctgttt cactgaaat ggacacatat gctcatgttg ctttttttgt tttagaaaaa  
4021 aaaacaacat agttttctga aggggcgact taaaactgtg gagagtgggg agagttcgga  
4081 aagaaatatg tttttatata taaaatatat atgtggagtt ttgtgggatg gggaagagat  
4141 tttagttgtt atttaacttg agaaagacta agcgcctctt agtgtcaggg aagttgcctc  
4201 agtgctccca gaagtcctgt gactgtgacg agacctctgt ctgctgcacc agctggggac  
4261 tctggcttcc agagctttcc cagggtgttt ggatcagatc aaattttgtc ctctcttggg  
4321 gactgctttt tatctgaatt atcatttagt caaggtagag tgttttttta tacataccaa  
4381 atggagatag cagcctctcc tagttttatt tcaaaacgtt tcacattaaa tgggtgtgaag  
4441 cgttggttg gcaaccaaca gctttggctt ctggtgtggt caatatttca gtctgacata  
4501 ggttttgttt gtagtgaaca aagttgaaac atttgctctg gactaaagaa gcctagtggg  
4561 ttgtgtggcc aactccatcg gatgaatgca cacgcagaca gaccctctgt atatttctgc  
4621 attattcttg tctccttttc agaccatgat ggccaatatg gagattaaaa tatgtcatca  
4681 gtcactctct tatgggtgact tccctttgca aaccaggctg tgaccaaacac atgtgagacc  
4741 cagtcctgtt tggttttctt ccgttggaac caccagaca tctgcttcca cccagccaag  
4801 cccacatcac atctcctggc cgagagcagc cactgccact cagtctgaca gcttgcgact  
4861 gcatctgtat tttcaggggt gcagtgagct cacctctccc actgcaccct ggggtgggtg

4921 cacagccctc attcttttca tgagcccgac ctctctcgga gcagcttcag gcctctgcc  
4981 gtgtcccccag cacttttagg tcatttgac acttggggaa aagtgaggcc agtctgccc  
5041 gcttttttaca aaacctcatg ttgcattgta tattccaaag atgggttcaga aaatttaata  
5101 ttggtccctg gtggaaattc aaagttatca ctgaagaaca gttgacttaa aattggacca  
5161 agactatgag gcttaaaagg gaccagggtt ttcttttttt tttttttttt tttttttttt  
5221 agatggagtt tctttttgcc caggctggag tgcagtggcg ccactctggc tcaactgcaac  
5281 ctctgcctcc caggttcaag cgattctcct gcctcagcct cctgagtagc tgggaccaca  
5341 ggcgactgcc accacacca gctaattttt tgtattttta gtagagacag ggtttcacca  
5401 tgttggccag gctggtctcg aactcctgac ctcaagcgat ccaccacct cggcctccca  
5461 aagtgtctggg attacaggcg tgagccacca cgcccaactg ggaccagggt tttctgtttt  
5521 ttgatggagg tgaaatctct ttgtaatcca ctaggttttc atcgtaaaac catcttatgc  
5581 ctgactatta aacctattct tcataaacac aagaacactt taatttttcg ttaatttaca  
5641 aagtaacatc agctgcctat gcctatgata aggtagcagt ctgcattctt atggccatta  
5701 gatgttaciaa actccttgcc tctaaagtca gatcatgaag ggataggtgt tcatctaagg  
5761 ttacagttat gttaccgaaa cacaaaactg ccaaaatctt actctgctgt tatgaatgtt  
5821 taccatcagc attattttat catttaatat gtgctcactg attgttaact gtagcttcag  
5881 cgcgtgccaa gcagttgact taataggatc atcttgtgaa tttgtttacg tgatgccaa  
5941 catcaagtca tgttttcttt agtgtgtgtg cttacacagg tgttaaacag tttttctcta  
6001 ttttaaactg agccttcttt ttaatatatt cccgaagaga tatgtaaata agctctcaga  
6061 gtttctgtga tgatttggtg agccttgctg gacaagtggg ttgtttgtgt gcaaaccaaa  
6121 ctttctttac ccagtgaat agatttggtt gactgcttgt gtctttttat gacctgtttg  
6181 ccttttagaa aattggtaaa taaagcaagt atattttt

Sequence I.D. No. 17

MNGYAEFPPSPSNPTKEPVEPQPSQVPLQEDVDMSSGSSGHETN  
ENCSTGRDSQGSDDSGKELGMLVEPPDARQSPDTFSLMMAKSEHNPSTSGCSDQS  
SKVDTHKELIKTLKELKVHLPADKKAKGKASTLATLKYALRSVKQVKANEEYYQLMS  
SEGHPCGADVPSYTVSEMESVTSEHIVKNADMFAVAVSLVSGKILYISDQVASIFHCK  
RDAFSDAKFVEFLAPHDVGVFHSFTSPYKLPWSMCSGADSFTQECMEEKSFRCRVSV  
RKSHENEIRYHPFRMTPYLKVRDQQAESQLCCLLLAERVHSGYEAPRIPPEKRIFT  
THTPNCLFQDVERAVPLLGYLPQDLIETPVLVQLHPSDRPLMLAIHKKILQSGGQP  
FDYSPIRFRARNGEYITLDTSWSSFINPWSRKISFIIGRHKVRVGPLNEDVFAAHPCT  
EEKALHPSIQELTEQIHRLLLQVPVPHSGSSGYGSLGNSHEHLMSQTSSSDSNGHED  
SRRRRAEICKNGNKTNRSHYSHEGQKKKSVTEMQTNPPAEKKAVPAMEKDSLGSV  
FPEELACKNQPTCSYQQISCLDSVIRYLESCNEAATLKRKCEFPANVPALRSSDKRKA  
TVSPGPHAGEAEPPSRVNSRTGVGTHLTSLALPGKAESVASLTSQCSYSSTIVHVGDK

KPQPELEMVEDAASGPESLDCLAGPALACGLSQEKEPFKKLGLTKEVLAAHTQKEEQS  
FLQKFKEIRKLSIFQSHCHYYLQERSKGQPSERTAPGLRNTSGIDSPWKKTGKNRKLK  
SKRVKPRDSSESTGSGGPVSARPPVLVGLNATAWSPSDTSQSSCPAVFPAPVPAAYSL  
PVFPAPGTVAAAPPAPPHASFTVPAVPVDLQHQFAVQPPFPAPLAPVMAFMLPSYSFP  
SGTPNLPQAFFPSQPQFPSHPTLTSEMASASQPEFPSRTSIPRQPCACPATRATPPSA  
MGRASPPLFQSRSSSPLQLNLLQLEEAPEGGTGAMGTTGATETAAVGADCKPGTSRDQ  
QPKAPLTRDEPSDTQNSDALSTSSGLLNLLNEDLCSASGSAASESLGSGSLGCDASP  
SGAGSSDTSHTSKYFGSIDSSENNHHAKMNTGMEESEHFIKCVLQDPIWLLMADADSS  
VMTTYQLPSRNLEAVLKEDREKLKLLQKLQPGSRRVRSRSCARSTSGCRRACQPQST  
WQNVFTVKTRKKVIFAYHMRKIFLLWDSAKCRTPKKTKMDPP

**MOP9:**

SEQ ID NO:9 (MOP9 cDNA)

CCGGGCAGGTCTCCTGTGGTTTCCAGCCGCGTGAGTCCAGGGACAAGACCAACAGCTATGGGGTCTTTCAGCT  
CACACATGACAGAGTTTCCACGAAAACGCAAAGGAAGTGATTGAGACCCATCCCAGTCAGGAATCATGACAGA  
AAAAGTGGTGAAAAGCTTTCTCAGAATCCCCTTACCTATCTTCTTCAACAAGGATAGAAATATCAGCCTCC  
AGTGGCAGCAGAGAAGCTCATAGCCAAACTGAAAAGCGGAGGAGAGATAAAATGAATAACCTGATTGAAGAAC  
TGTCTGCAATGATCCCTCAGTGCAACCCCATGGCGCGTAACTGGACAACTTACAGTTTTAAGAATGGCTGT  
TCAACACTTGAGATCTTTAAAGGCTTGACAAATCTTATGTGGGAAGTAATTATAGACCATCATTTCTTCAG  
GATAATGAGCTCAGACATTTAATCCTTAAGACTGCAGAAGGCTTCTTATTTGTGGTTGGATGTGAAAGAGGAA  
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TTGGCTCAAGACGATCTTTTTCTGTCTCGGATAAAGAGTTGTAAATCTCTGTCAAAGAAGAGCATGGATGCTT  
ACCCAACTCAAAGAAGAAAGAGCACAGAAAATTCTATACTATCCATTGCACTGGTTACTTGAGAAGCTGGCCT  
CCAAATATTGTTGGAATGGAAGAAGAAAGGAACAGTAAGAAAGACAACAGTAATTTTACCTGCCTTGTGGCCA  
TTGGAAGATTACAGCCATATATTGTTCCACAGAACAGTGGAGAGATTAATGTGAAACCAACTGAATTTATAAC  
CCGGTTTGCAGTGAATGGAATAATTTGTCTATGTAGATCAAAGGGCAACAGCGATTTTAGGATATCTGCCTCAG  
GAACTTTTGGGAACCTTCTTGTTATGAATATTTTCATCAAGATGACCACAATAATTTGACTGACAAGCACAAG  
CAGTTCTACAGAGTAAGGAGAAAATACTTACAGATTCCTACAAATTCAGAGCAAAAGATGGCTCTTTTGTAAC  
TTTAAAAGCCAATGGTTTAGTTTCACAAATCCTTGGACAAAAGAACTGGAATATATTGTATCTGTCAACACT  
TTAGTTTGGGACATAGTGAGCCTGGAGAAGCATCATTTTTACCTGTAGCTCTCAATCATCAGAAGAATCCT  
CTAGACAGTCCTGTATGAGTGACCTGGAATGTCTACTGGAACAGTACTTGGTGCTGGTAGTATTGGAACAGA  
TATTGCAAATGAAATCTGGATTTACAGAGGTTACAGTCTTCTTCATACCTTGATGATTCGAGTCCAACAGGT  
TTAATGAAAGATACTCATACTGTAACTGCAGGAGTATGTCAAATAAGGAGTTGTTTCCACCAAGTCCTTCTG  
AAATGGGGGAGCTAGAGGCTACCAGGCAAAACCAGAGTACTGTTGCTGTCCACAGCCATGAGCCACTCCTCAG

TGATGGTGCACAGTTGGATTTTCGATGCCCTATGTGACAATGATGACACAGCCATGGCTGCATTTATGAATTAC  
TTAGAAGCAGAGGGGGGCCTGGGAGACCCTGGGGACTTCAGTGACATCCAGTGGACCCTCTAG

SEQ ID NO:18 (MOP9 protein)

MGSFSSHMTEFPRKRKGSDDPSQSGIMTEKVVEKLSQNPLTYLLSTRIEISASSGSREAHSQTEKRRRDKMN  
NLIEELSAMIPQCNPMARKLTKLTVLRMAVQHLRSLKGLTNSYVGSNYRPSFLQDNELRHLILKTAEGFLFVV  
GCERKILFVSKSVSKILNYDQASLTGQSLFDLHPKDVAKVKEQLSSFDISPKEKLIDTKTGLQVHSLHAG  
RTRVYFGSRRSFFCRIKSKISVKEEHGCLPNSKKKEHRKFYTIHCTGYLRSWPPNIVGMEEERNSSKKDNSNF  
TCLVAIGRLQPYIVPQNSGEINVKPTFIFTRFAVNGKFVYVDQRATAILGYLPQELLGTSCYEFHQDDHNNL  
TDKHKAVLQSKEKILTDSYKFRADGSGFVTLKSQWFSFTNPWTKELEYIVSVNTLVLGHSEPGEASFLPCSSQ  
SSEESSRQSCMSVPGMSTGTVLGAGSIGTDIANEILDQLRLQSSSYLDDSSPTGLMKDTHTVNCRSMSNKELF  
PPSPSEMGELEATRQNSTVAVHSHEPLLSDGAQLDFDALCDNDDTAMAAFMNYLEAEGGLGDPGDFSDIQWT  
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